



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/627,623

07/28/2003

Reuven Unger

P23593

4331

7055 7590 06/03/2008
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

GARCIA, ERNESTO

ART UNIT

PAPER NUMBER

3679

NOTIFICATION DATE

DELIVERY MODE

06/03/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No. 10/627,623	Applicant(s) UNGER ET AL.	
	Examiner ERNESTO GARCIA	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7-10,12-14 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) 4,8,13,25,29 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,9,10,12,14,26-28 and 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election of Species

Claims 4, 8, 13, 25, 29, and 33, are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on January 3, 2007.

Drawings

The drawings were received on January 22, 2008. These drawings are acceptable.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: “said spring having three different inner diameters” recited in

Art Unit: 3679

claims 1 and 5, lines 5-6, "a portion of a first thread is formed on an inner periphery of a portion of the first inner diameter" recited in claim 1, lines 14-16, and "spring mount ... unitarily formed with the spring mount" recited in claim 10, lines 4-5.

The disclosure is objected to because of the following informalities:

on paragraph [0031], it describes "a diameter of the spring mount 440" in line 5. This diameter should be identified to understand what diameter the applicants are referring to. Further, the description "the female screw 450 ... is formed on the inner periphery of the spring mount 440" is incorrect since the female screw is not formed on the inner periphery of the spring mount 440, which is the shoulder as identified in Figure 3, but rather the screw is formed on what appears to be the upper portion of the spring support. Note that the same description occurs in paragraph [030]. Further, paragraph [031] should correctly label the "one portion" in line 2 and the "another portion" in line 4 as first portion and second portion respectively in order for the third portion described in line 6 follows accordingly. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 5, 7-10, 12, 14, 27, 28, 31, and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to

Art Unit: 3679

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 5, the recitation “and further configured to apply a combining force” in line 15 is not supported by the written description requirement. Nowhere does the specification mention anything about the fixation holes “applying a combining force” nor do the drawings provide for such configuration of the hole that applies a combining force.

Regarding claim 10, the recitation “consisting of three different inner diameters” in line 6 is not supported by the written description requirement. The figures as amended do not just provide for three inner diameters because the peak of the thread and the infinitesimal points between the peak and the trough of the thread form other diameters. Although the infinitesimal points and the peak of the thread are not labeled, one can see that diameters can be drawn across thus providing for more than three diameters and not just three as called for.

Regarding claims 7-9, 27, and 31, the claims depend from claim 5 and therefore are not supported by the written description requirement.

Regarding claims 10, 14, 28, and 32, the claims depend from claim 10 and therefore are not supported by the written description requirement.

Claims 1, 5-7, 9, 10, 12, 14, 26, 27, 28, and 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 5, and 10, the recitation "in this order" in line 6 is unclear. Are the three diameters contiguous to each other? If so, this cannot be possible since the trough of the thread and the peak of the thread provide for many points in between and thus there would be several diameters between the trough and the peak of the thread. Since diameter D1 has been indicated to be the trough of the thread, how can the order be D1-D2-D3, when in reality the order is D1-D2-D1-D2, etc., and then ending in D3 as the peak of the thread is at diameter D2?

Regarding claim 10, the recitation "consisting of three different inner diameters in this order" in lines 6-7 is misdescriptive and/or inaccurate. Since each loop of the thread provides for infinitesimal different inner diameters in addition to the first portion where the thread is formed and the portion where D3 is located, how can there be only three inner diameters when the infinitesimal points provide for additional diameters?

Regarding claims 1, 7, and 12, the recitation "on an inner periphery of a portion of the first inner diameter of the spring support" in claim 1, lines 14-15, and claims 7 and 12, line 2, makes unclear how one forms a portion of a first thread on the first inner

Art Unit: 3679

diameter when in fact the first inner diameter is a result of the first thread. Further, is one to assume that there is an outer periphery of the portion of the first inner diameter as well? If so, wouldn't this provide for four inner diameters instead of three? Based on Figure 3, there are only two cavity portions where one portion is partially threaded and the top cavity portion is of constant diameter.

Regarding claim 5, the recitation "penetratingly formed through the coupling ring" in lines 13-14 is redundant since the recitation "extending through the coupling ring" inherently provides for penetration of holes otherwise the holes would not extend through the ring.

Regarding claims 26 and 30, the claims depend from claim 1 and therefore are indefinite.

Regarding claims 6, 7, 9, 27, and 31, the claims depend from claim 5 and therefore are indefinite.

Regarding claims 12, 14, 28, and 32, the claims depend from claim 10 and therefore are indefinite.

Claim Rejections - 35 USC § 102

Claims 1, 26, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Philips et al., 2,896,447.

Regarding claim 1, Phillips et al. disclose, in Figure 1, a securing device comprising a spring **3**, a rod **1**, a generally annular spring support **4** and a generally annular coupling ring **9**. The spring **3** supports the rod **1** at a central portion of the spring **3** and biases the rod **1**. The spring support **4** includes a spring mount **A2** (see marked-up attachment provided in the last Office action) projecting in an inner side of the spring support **4**. An outer peripheral portion of the spring **3** is prevented from movement by the spring support **4** and the coupling ring **9**. The spring support **4** has a first inner diameter **A5**, a second inner diameter **A6**, and a third inner diameter **A7** in this order. The third diameter **A7** is smaller than the second inner diameter **A6**. The spring mount **A2** is positioned at a region of the spring support **4** located between the second inner diameter **A6** and the third inner diameter **A7**. A portion of a first thread is formed on an inner periphery of a portion of the first inner diameter **A5**, and a second thread is formed on an outer periphery of the coupling ring **9**. The first thread and the second thread threadably engage each other.

Regarding claim 26, the spring support **4** and the coupling ring **9** clamp the outer peripheral portion of the spring **3** therebetween.

Regarding claim 30, the spring **3** is secured to the rod **1**.

Claims 1, 26, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Spencer, et al., 1,883,251.

Regarding claim 1, Spencer et al. disclose, in Figure 1, a securing device comprising a spring **3**, a rod **A1** (see marked-up attachment), a generally annular spring support **A2** and a generally annular coupling ring **7**. The spring **3** supports the rod **A1** at a central portion of the spring **3** and biases the rod **A1**. The spring support **A2** includes a spring mount **A3** projecting in an inner side of the spring support **A2**. An outer peripheral portion of the spring **3** is prevented from movement by the spring support **A2** and the coupling ring **7**. The spring support **A2** has a first inner diameter **A4**, a second inner diameter **A5**, and a third inner diameter **A6** in this order. The third diameter **A6** is smaller than the second inner diameter **A5**. The spring mount **A3** is positioned at a region of the spring support **A2** located between the second inner diameter **A5** and the third inner diameter **A6**. A portion of a first thread **A7** is formed on an inner periphery of a portion of the first inner diameter **A4**, and a second thread is formed on an outer periphery of the coupling ring **7**. The first thread and the second thread threadably engage each other.

Regarding claim 26, the spring support **A2** and the coupling ring **7** clamp the outer peripheral portion of the spring **3** therebetween.

Regarding claim 30, the spring **3** is secured to the rod **A1**.

Claim Rejections - 35 USC § 103

Claims 5, 7, 9, 27, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Cox et al., 2,753,544, in view of Petty, 2,348,225, and further in view of Muellenberg, 5,067,847.

Regarding claim 5, Cox et al. discloses, in Figure 1, a securing device comprising a spring **24**, a rod **14**, a generally annular spring support **11**, and a generally annular coupling ring **36**. The spring **24** supports the rod **14** at a central portion of the spring **24** and biases the rod as the rod **14** elastically moves back and forth. Applicants should note that the spring **24** is able to support a rod such that the rod elastically moves back and forth. The spring support **11** includes a spring mount (the shoulder) projecting in an inner side of the spring support **11**. The spring support **11** has a second inner diameter **A6** (see marked-up attachment provided in the last Office action), a third inner diameter **A7**. The third inner diameter **A7** is smaller than the second inner diameter **A6**. The spring mount is positioned at a region of the spring support located between the second inner diameter **A6** and the second inner diameter **A7**; however, Cox et al. fails to

Art Unit: 3679

disclose a first inner diameter thus providing for an order of three diameters. Petty teaches, in Figure 1, a first inner diameter to hold a spring **21** with a threaded annular coupling ring **31**. Note that creating a thread to fix a threaded annular coupling ring will result three inner diameters in Cox et al. since the valley of the thread will provide for a first inner diameter to the spring support. Therefore, as taught by Petty, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a first inner diameter formed by a thread to use an annular coupling ring that is to be threaded to the spring support instead of being fixed with a screw as taught in Cox et al. Further, given the modification, the spring support would have had three different inner diameters since the bottom of the thread would constitute the first diameter similar to the way applicants have shown their first diameter D1 in Figure 3.

Given the replacement of the ring of Cox et al. with that of Petty, Cox et al. fixation holes **34** would have extended into the coupling ring **3** (col. 4, lines 16-22). However, the fixation holes would not have extended through the coupling ring 3.

Muellenberg teaches, in Figure 3, fixation holes 29 in a coupling ring 7 similar to those of Petty for the same purpose of releasing the coupling ring and fixation holes 9, in Figure 1, extending through the coupling ring 7 in the alternative. Therefore, as taught by Muellenberg, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the fixation holes used in Petty with those of Muellenberg in the alternative to release the coupling ring. Given the further

Art Unit: 3679

modification, the fixation holes would apply a combination force between the spring support and the coupling ring and facilitate connection of the spring support to the coupling ring, and the coupling ring 36 is configured to connect to the spring support.

Regarding claim, 7, given the modification, a portion of a first thread would have been formed on an inner periphery of a portion of the first inner diameter, and second thread would have been formed on an outer periphery of the coupling ring to threadably engage with the first thread. Note that the bottom of the thread lies at the first inner diameter.

Regarding claim 9, the fixation holes are at an interval of one of approximately 90 degrees and 180 degrees on the coupling ring (note that 120 degrees is shown for the holes of the spring in Figure 3 and is approximately 90 degrees).

Regarding claim 27, the spring support **11** and the coupling ring **36** clamp the outer peripheral portion of the spring **24** therebetween.

Regarding claim 31, the spring **24** is secured to the rod **14**.

Claims 10, 12, 14, 28, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab, 5,269,499, in view of Spencer et al., 1,883,251, and further in view of Muellenberg, 5,067,847.

Regarding claim 10, Schwab discloses, in Figure 6, a securing device comprising a spring **12**, a rod **18**, a generally annular spring support **14**, and a generally annular coupling ring **16**. The spring support **14** includes a spring mount **32** projecting in an inner side of the spring support **14**, unitarily being formed with the spring support **14**, and configured to support the spring **12**. The spring support **14** consists of two different inner diameters, in this order, a second inner diameter **A2** (see marked-up attachment), and a third inner diameter **A3** that is smaller than the second inner diameter **A2**. The spring mount **32** is positioned at a region of the spring support **14** located between the second inner diameter **A2** and the third inner diameter **A3**. However, Schwab fails to disclose the support member further consisting of a first inner diameter and threaded holes penetratingly formed through the coupling ring **16**.

Spencer et al. teach, in Figure 1, a support member (unreferenced; however mating with feature 7) having a thread which provides for a first inner diameter similar to applicants' first inner diameter. Since one skilled in the art would have replaced the coupling ring of Schwab with that of Spencer et al. so that instead of press-fitting the coupling ring one would thread the coupling ring in place. Accordingly, one skilled in the art at the time the invention was made would have placed a thread on the spring support **14** of Schwab to enclose the spring **12** and the mere substitution would have inherently provided the first inner diameter thus providing for three different inner diameters in that order. Therefore, as taught by Spencer et al., it would have been

Art Unit: 3679

obvious to one of ordinary skill in the art at the time the invention was made to include thread in the spring support thus inherently providing for a first inner diameter so that the coupling ring is threaded in the spring support rather than being press-fitted.

Further, Muellenberg teaches between Figures 1 and 3, threaded holes **9** penetratingly formed through a coupling ring to place withdrawal screws and release a ring in a threaded opening (col. 4, lines 13-17, and col. 5, lines 1-6). Therefore, as taught by Muellenberg, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use threaded holes to place withdrawal screws to release the connection between the ring and the spring support.

Regarding claim 12, given the modification, a portion of a first thread would have been formed on an inner periphery of a portion of the first inner diameter. A second thread would have been formed on an outer periphery of the coupling ring **31**. The first thread and the second thread engage each other.

Regarding claim 14, given the modification, the threaded holes, as modified, would have been at an interval of approximately 90 degrees or 180 degrees on the coupling ring.

Regarding claim 28, given the modification, the spring support **10** and the coupling ring **31** would have clamped the outer peripheral portion of the spring **21** therebetween.

Regarding claim 32, the spring **21** is secured to the rod **27**.

Response to Arguments

Applicant's arguments filed January 22, 2008 have been fully considered but they are not persuasive.

With respect to Philips et al., applicant argues that the coupling ring 9 identified by the examiner is not configured to mount on the spring 3, but rather is mounted on the cam ring 7. In response, this argument has not been found persuasive since this language does not impart any structure to the coupling ring but rather is a broad limitation as to what the coupling ring is capable of doing or performing. If the applicants believe that the language imparts structure, then what configuration is the applicant referring to. Note that the rejected claims do not set forth any structure to the coupling ring. Further, the fact that the coupling ring 9 is mounted on the cam ring 7 does not obviate that the ring is still configured to mount on the spring 3 indirectly. Nowhere do the rejected claims mention that the coupling spring is in contact with the spring or for that matter directly mounted on the spring.

Conclusion

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Von Basel, 2,689,723, and Spencer, 2,066,162, 1,895,591, 1,848,031, 1,845,997, and 1,773,698, show a similar a similar coupling ring and securing device.

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. In particular, the new limitations "different inner diameters" in claims 1 and 5, lines 5-6, "a portion of a first thread is formed on an inner periphery of a portion of the first inner diameter" in claim 1, lines 14-15, "and penetratingly formed through the coupling ring" in claim 5, lines 13-14, "and unitarily formed with the spring support" in claim 10, line 5, "consisting of three different inner diameters" in claim 10, line 6, and "penetratingly formed through" in claim 10, line 13, necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 3679

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERNESTO GARCIA whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30-6:00. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 3679

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/E. G./

Examiner, Art Unit 3679

June 1, 2008

Attachments: one marked-up page of Schwab, 5,269,499
one marked-up page of Spencer et al., 1,883,251

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679

Schwab, 5,269,499

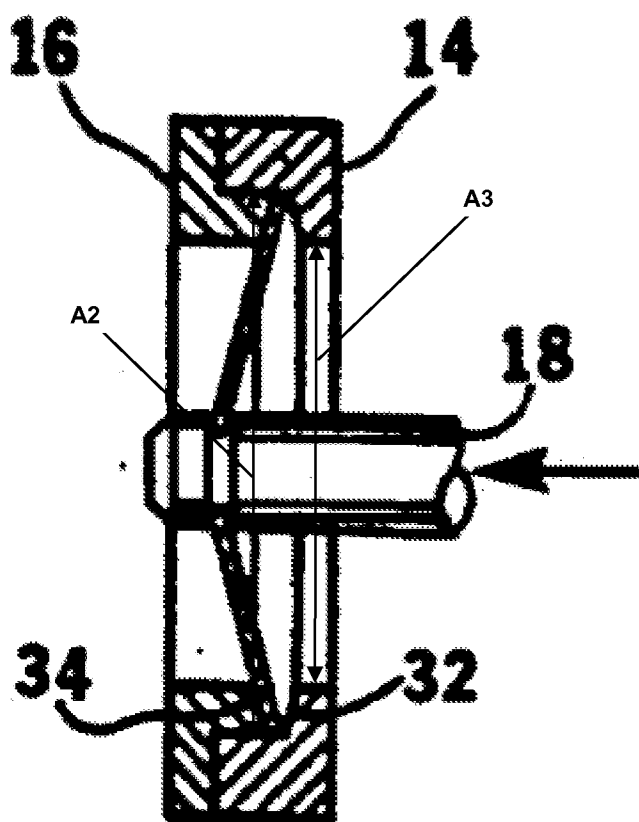


FIG. 6.

Art Unit: 3679

Spencer et al., 1,883,251

Fig. 1.

